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| 10/587,213 | 07/25/2006 | Yong-Il Kang | 123037-06090708 | 7165 |
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| LOWE HAUPTMAN HAM & BERNER, LLP | | | CATTUNGAL, AJAY P | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|------------------------------------|
| Office Action Summary | Application No. 10/587,213 | Applicant(s) KANG ET AL. |
| | Examiner AJAY P. CATTUNGAL | Art Unit 4173 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 25 July 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 July 2006 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/0254/06)
Paper No(s)/Mail Date 07/25/06

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. This application has been examined. Claims 1-11 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 1, 2, 4, 5, 8, 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushmitch et al. (5,928,331) in view of Halliday et al. (US 2008/0140852)

Re claim 1, Bushmitch et al. substantially discloses a method for distributing stream data based on a multi-path scheme using Transmission Control Protocol (TCP) (TCP protocol message Col 6 lines 36-37), the method comprising the steps of: a)

requesting an input unit to transmit stream data (requesting a particular media selection Col 6 lines 36-40); b) receiving the stream (Col 6 lines 43-46, Transmits the stream open message, so its inherent that it has to be received) data generated in the input unit based on TCP scheme(Col 5 lines 43-46); e) transmitting the stream data to one or more relays(media push engines) that request stream data transmission (Col 6 lines 46 -50 media push engines enter a multicast session) of the specific channel according to transmission control information of a controller (Col 6 lines 50-53 Admission control unit, provides the information for the multicast session); and f) receiving the stream data of the specific channel from one of neighboring relays (Col 6 lines 54-60 The messages is being exchanged among the multicast group members which includes the media push engine and the clients). Bushmitch et al does not disclose c) assigning the received stream data to a specific channel; d) confirming a relay that requests stream data transmission of the specific channel; However Halliday et al. discloses c) assigning the received stream data to a specific channel (Para 85 lines 4-7); d) confirming a relay that requests stream data transmission of the specific channel (Para 10 lines 8-10 here the server is accepting the request and sending it on a channel which inherently means that it is confirmed that the server will be sending the file) ; It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of Bushmitch et al. with using of a specific channel of Halliday et al in order to provide a media delivering system for delivering media selection to one or more media clients over a multicasting network..

Re claim 2, Note that Bushmitch et al. discloses a method of confirming that the stream data generated in the input unit are not transmitted (Col 6 lines 39-41 The admission control unit checks the catalog to determine if the selection is present, It hasn't transmitted the selection yet); and requesting (request is sent) neighboring relays (media push engines) to transmit the stream data of the specific channel (Col 6 lines 42-50 After assuming the selection is present it send request to the media push engines to transmit the selection).

Re claim 4, Bushmitch et al. discloses a method of receiving a request (requesting) for the stream data transmission (media selection) from a player (client) (Col 6 lines 36- 39 The messages is being exchanged among the multicast group members which includes the media push engine and the clients) ; and transmitting the stream data to one or more players (Col 6 lines 46-50) that make a request to transmit the stream data based on the TCP (Col 5 lines 43-46 TCP protocol used for transmission) scheme according to transmission control information of a controller (Admission control unit) (Col 6 lines 50-53 Admission control unit, provides the information for the multicast session); Bushmitch et al does not disclose to transmit the stream data on a specific channel. However Halliday et al. discloses transmit the stream data on a specific channel (Para 85 lines 4-7). It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of Bushmitch et al. with using of a specific channel of Halliday et al in order to provide a media delivering system for delivering media selection to one or more media clients over a multicasting network.

Re claim 5, Note that Bushmitch et al. discloses a method where an internet address of the relay that makes a request to transmit the stream data to the specific channel is confirmed using a routing table storing information of the one or more relays that make a request to transmit the stream data of the specific channel (Col 6, lines 60-64 Here the routing table is in the Admission Control Unit which assigns address to the relays for streaming of data).

Re claim 8, Bushmitch et al. substantially discloses a method for distributing stream data based on a multi-path scheme using Transmission Control Protocol (TCP) (TCP protocol message Col 6 lines 36-37), in a video-on-demand (VOD) system provided with a processor, the method comprising the steps of: a) requesting an input unit to transmit stream data (requesting a particular media selection Col 6 lines 36-40); b) receiving the stream (Col 6 lines 43-46, Transmits the stream open message, so its inherent that it has to be received) data generated in the input unit based on TCP scheme(Col 5 lines 43-46); e) transmitting the stream data to one or more relays(media push engines) that request stream data transmission (Col 6 lines 46 -50 media push engines enter a multicast session) of the specific channel according to transmission control information of a controller (Col 6 lines 50-53 Admission control unit, provides the information for the multicast session); and f) receiving the stream data of the specific channel from one of neighboring relays (Col 6 lines 54-60 The messages is being exchanged among the multicast group members which includes the media push engine and the clients). Bushmitch et al does not disclose c) assigning the received stream data to a specific channel; d) confirming a relay that requests stream

data transmission of the specific channel; However Halliday et al. discloses c) assigning the received stream data to a specific channel (Para 85 lines 4-7); d) confirming a relay that requests stream data transmission of the specific channel (Para 10 lines 8-10 here the server is accepting the request and sending it on a channel which inherently means that it is confirmed that the server will be sending the file); It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of Bushmitch et al. with using of a specific channel of Halliday et al in order to provide a media delivering system for delivering media selection to one or more media clients over a multicasting network..

Re claim 9, Note that Bushmitch et al. discloses a computer-readable recording medium, wherein the method further comprising the steps of confirming that the stream data generated in the input unit are not transmitted (Col 6 lines 39-41 The admission control unit checks the catalog to determine if the selection is present, It hasn't transmitted the selection yet); and requesting (request is sent) neighboring relays (media push engines) to transmit the stream data of the specific channel (Col 6 lines 42-50 After assuming the selection is present it send request to the media push engines to transmit the selection).

Re claim 11, Bushmitch et al. discloses a method of receiving a request (requesting) for the stream data transmission (media selection) from a player (client) (Col 6 lines 36- 39 The messages is being exchanged among the multicast group members which includes the media push engine and the clients); and transmitting the

stream data to one or more players (Col 6 lines 46-50) that make a request to transmit the stream data based on the TCP (Col 5 lines 43-46 TCP protocol used for transmission) scheme according to transmission control information of a controller (Admission control unit) (Col 6 lines 50-53 Admission control unit, provides the information for the multicast session); Bushmitch et al does not disclose to transmit the stream data on a specific channel. However Halliday et al. discloses transmit the stream data on a specific channel (Para 85 lines 4-7). It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of Bushmitch et al. with using of a specific channel of Halliday et al in order to provide a media delivering system for delivering media selection to one or more media clients over a multicasting network.

5. Claim 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bushmitch et al. (5,928,331) in view of Halliday et al. (US 2008/0140852) and in further view of Ruutu et al. (US 7,092,358)

Re claim 3, Bushmitch et al in view of Halliday et al. discloses the claimed invention as set forth in claim 1 above. Bushmitch et al. in view of Halliday et al. does not disclose a method of receiving the stream data generated in the input unit from a plurality of relays; and releasing a connection with other relays except a neighboring relay with the fastest transmission rate among the relays according to transmission control information of the controller. However Ruutu et al. method of receiving the stream data (data packet) generated in the input unit from a plurality of relays (Col 10 lines 38-44 C1-C3 indicates a plurality of relays); and releasing a connection with other

relays except a neighboring relay with the fastest transmission rate (Col 3 line 57 – Col 4 line 6 Quality of service QoS of the data stream decides where the data should be taken from. A faster transmission rate is also indicative of the QoS of a connection. Col 10 lines 38-44 teaches that one of the plurality of relays C1-C3 is chosen to get the data) among the relays (C1-C3) according to transmission control information of the controller. It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of the already combined teachings of Bushmitch et al and Halliday et al. with the flexible Quality of Service of Ruutu et al in order to provide a better quality of service.

Re claim 10, Bushmitch et al. in view of Halliday et al. discloses the claimed invention as set forth in claim 1 above. Bushmitch et al. in view of Halliday et al. does not disclose a method of receiving the stream data generated in the input unit from a plurality of relays; and releasing a connection with other relays except a neighboring relay with the fastest transmission rate among the relays according to transmission control information of the controller. However Ruutu et al. method of receiving the stream data (data packet) generated in the input unit from a plurality of relays (Col 10 lines 38-44 C1-C3 indicates a plurality of relays); and releasing a connection with other relays except a neighboring relay with the fastest transmission rate (Col 3 line 57 – Col 4 line 6 Quality of service QoS of the data stream decides where the data should be taken from. A faster transmission rate is also indicative of the QoS of a connection. Col 10 lines 38-44 teaches that one of the plurality of relays C1-C3 is chosen to get the data) among the relays (C1-C3) according to transmission control information of the

controller. It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of the already combined teachings of Bushmitch et al and Halliday et al. with the flexible Quality of Service of Ruutu et al in order to provide a better quality of service.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bushmitch et al. (5,928,331) in view of Halliday et al. (US 2008/0140852) and in further view of Siracusa et al. (US 5,289,276).

Re claim 6, Bushmitch et al. in view of Halliday et al. discloses the claimed invention as set forth in claim 1 above. Bushmitch et al. in view of Halliday et al. does not disclose a method wherein the input unit compresses moving picture data provided by a contents provider and generates stream data in form of a frame pack including frames and header information of the compressed moving picture data. However Siracusa et al. disclose a method wherein the input unit (Video transmission system) compresses moving picture data (Compressed video signal) provided by a contents provider and generates stream data in form of a frame pack (frames of compressed video data) including frames and header information (video headers descriptive of the said respective layers) of the compressed moving picture data (Claim 14). It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture of the already combined teachings of Bushmitch et al and Halliday et al. with the video compression method of Siracusa et al

in order to allow a receiver to rapidly recover from occurrences of missing data or corrupted data.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bushmitch et al. (5,928,331) in view of Halliday et al. (US 2008/0140852) and in further view of Dries et al. (US 2006/0268939 A1).

Re claim 6, Bushmitch et al. in view of Halliday et al. discloses the claimed invention as set forth in claim 1 above. Bushmitch et al. in view of Halliday et al. does not disclose a method wherein the controller provides the transmission control information such as changing a path, dividing a channel or merging channels to the relay based on the TCP scheme while monitoring the bit rate of the stream data and the network states. However Dries et al. discloses a method wherein the controller(network analyzer) provides the transmission control information such as changing a path, dividing a channel or merging channels (merge two channels) to the relay based on the TCP scheme while monitoring the bit rate of the stream data (analyze the traffic) and the network states (Para 3 lines1-5, 10-15). It would have been obvious to one having ordinary skill in the art at the time of the invention to use the distributed multimedia streaming architecture the already combined teachings of Bushmitch et al and Halliday et al. with the network analyzer of Dires et al in order to produce an interleaved data stream.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AJAY P. CATTUNGAL whose telephone number is (571)270-7525. The examiner can normally be reached on Monday- Friday 7:30 - 5:00, Alternating Fridays OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinhee Lee can be reached on 571-292-1977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. P. C./
Examiner, Art Unit 4173

/Yemane Mesfin/
Examiner, Art Unit 2444